

- 29 -

ABSTRACT

A hybrid drive type vehicle having a permanent magnet type synchronous motor can provide high torque characteristics in low revolution speed range of the engine and high power generation characteristics at high revolution speed range of the engine. The hybrid drive type vehicle includes an electric rotary machine being formed with a stator and a rotor. A field magnet of the rotor include a first field magnet and a second field magnet. The first and second field magnets are opposing with a magnetic pole of the stator and having a mechanism for varying a phase of a magnetic pole resulting from combination of the first and second field magnets relative to the magnetic pole of the first field magnet depending upon direction of a torque of the rotor.